Filuma Sectional Garage Door Installation Manual

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Introduction

Filuma Garage Doors provide a complete range of door specifications to suit a variety of applications. These include the following;

- Single and Double garages up to 5000mm wide
- Lintel mounted springs or rear mounted low headroom kits
- Integrated cables in track system
- Spring break devices meeting CE standards
- Motorisation options with automated return and safety systems included

This guide will cover the installation steps for a standard overhead door with a lintel mounted spring set and manual lock. If an automatic door is to be installed please refer to the instruction booklet covering that range. **These instructions have been prepared for the use by an experienced professional fitter and are therefore not suitable for the "DIY" or apprentice installer.**

Before starting please read and fully understand all of the instructions within this manual

Certain components may have sharp edges therefore you are advised to wear safety gloves at all times

All of the components supplied are designed for use with this specific type of overhead door. Fitting of additional components may have an adverse effect on both the safety and the guarantee of the door.

During tensioning the springs can exert large forces. While carrying out this step of the process please ensure that you work carefully, use the proper equipment, stand in a steady position and clamp the door into the closed position to prevent any movement.

While installing the door ensure that there is sufficient light, all obstacles have been removed and there is no-one else present except the fitters. Certain aspects of the installation may be dangerous to others.

General Conditions

We strive to deliver items in conformance with the order. In practice, in spite of all of our controls, this is not always possible. However we will rectify any errors as quickly as possible in order to minimise the inconvenience caused to you or the end-user. As such, it is important that you inform us as soon as possible about any issues which arise with the delivery (include the order number and week of production) and give us the opportunity to offer a suitable solution. In this way any errors can be detected early on and rectified comparatively cheaply.

We will only reimburse 3rd party costs if we have given explicit permission before installing the other doors.

This manual does not confer any rights. Due to a company policy of continuous improvement, alterations to the specifications may be made at any time without notice. The company accepts no responsibility for any discrepancies which may occur between the specification of its equipment and the descriptions contained in its publications.

Hardware provided

The hardware set consists of;

- Vertical track set (complete with side seals) - 1no left hand & 1 no. right hand
- Horizontal track set - 1no left hand & 1 no. right hand
- 1 no. box containing
    - 2no. Top roller Brackets (1no. left hand & 1no. right hand)
    - 6/8no. mid roller carriers (3/4 for each hand dependant on whether a 4/5 panel door was ordered)
    - 2no. bottom roller carriers (1no. left hand & 1no. right hand) on bottom panel
    - 2no. cable drums (1no. left hand & 1no. right hand)
    - 2no. cables (length dependant on whether a 4/5 panel door was ordered)
    - 1/2no. Spring break device/s (number dependant on width of door ordered) with blocking peg
    - 1/2no. USA-A bracket/s complete with bearing, bracket and holder (number dependant on width of door ordered)
    - 1 no. coupler (larger doors only)
    - 2no. lock brackets (Manual doors only)
    - 1 no. bag containing M6 hex flanged screws and M8 screws/nuts (quantities vary based on door size)

- 1/2no. Torsion spring/s powder coated (handed dependant on door size)
- 1/2no. Shaft (number dependant on door size)
- 1no. Top Seal
- Top Seal clips (number dependant on door size)
- 4no. Lengths perforated galvanised angle

Tools Required

- Battery powered drill with 4.0mm and 6.0mm dia drill bits
- 3.0mm and 4.0mm Allen keys
- 10mm spanner
- 13mm spanner
- 15mm spanner
- 17mm spanner
- ¼" square socket wrench
- Vice grips (mole grips)
- Rubber mallet
- Cord
- Spirit level/Water level
- 2 blocks of ca. 20en 40mm in height
- Step ladders

Fixings

Fixings are not supplied by Filuma.

Fixing options include;

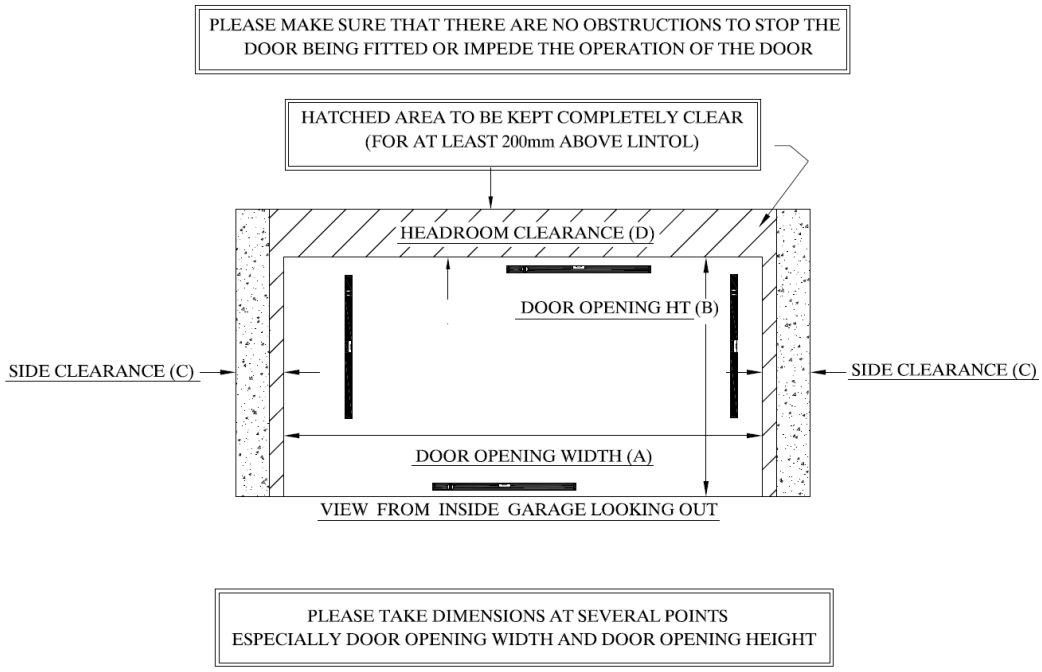
- Fastening of a 100mmx50mm (4"x2") timber goal post frame to rear of door pillars with door track secured to timber frame.
- Fixing of door tracks directly to brickwork

Checking dimensional details

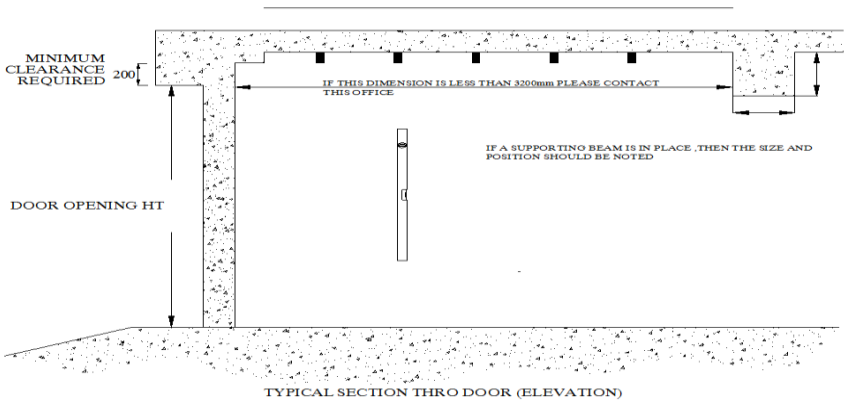
Before starting to remove the existing door please check that the new Filuma door is the correct size for the opening.

Installation Area Required (Drawing 1)

- Side Clearance (C) – minimum 117mm
- Headroom Clearance (D) – minimum 200mm at every point across the spring package


PLEASE MAKE SURE THAT THERE ARE NO OBSTRUCTIONS TO STOP THE DOOR BEING FITTED OR IMPEDE THE OPERATION OF THE DOOR
HATCHED AREA TO BE KEPT COMPLETELY CLEAR (FOR AT LEAST 200mm ABOVE LINTOL)
HEADROOM CLEARANCE (D)
DOOR OPENING HT (B)
SIDE CLEARANCE (C)
SIDE CLEARANCE (C)
DOOR OPENING WIDTH (A)
VIEW FROM INSIDE GARAGE LOOKING OUT
PLEASE TAKE DIMENSIONS AT SEVERAL POINTS ESPECIALLY DOOR OPENING WIDTH AND DOOR OPENING HEIGHT

Drawing 1


MINIMUM CLEARANCE REQUIRED
200
IF THIS DIMENSION IS LESS THAN 3200mm PLEASE CONTACT THIS OFFICE
IF A SUPPORTING BEAM IS IN PLACE ,THEN THE SIZE AND POSITION SHOULD BE NOTED
DOOR OPENING HT
TYPICAL SECTION THRO DOOR (ELEVATION)

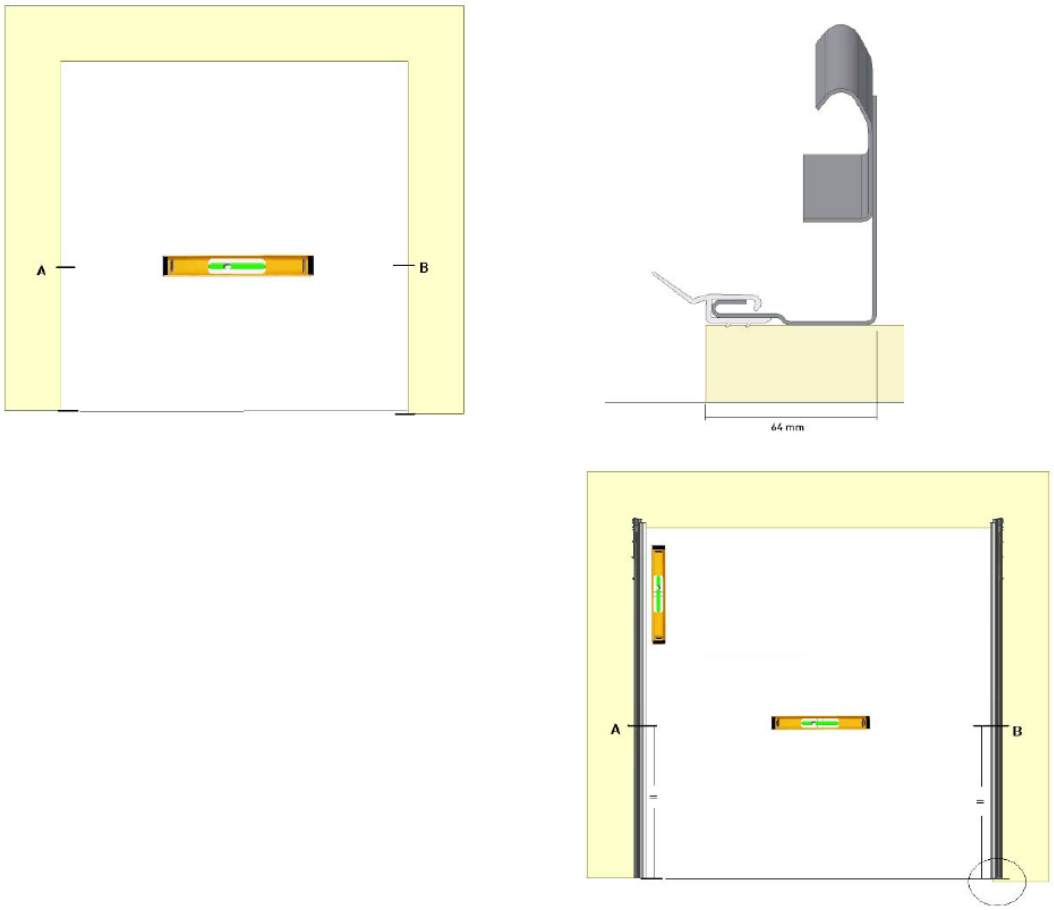
Drawing 2

Please contact this office if the minimum dimensions cannot be met

Assembly Instructions

Assembly of the Vertical tracks

1. First mark A and B on both piers using a spirit level **(Drawing 3)**

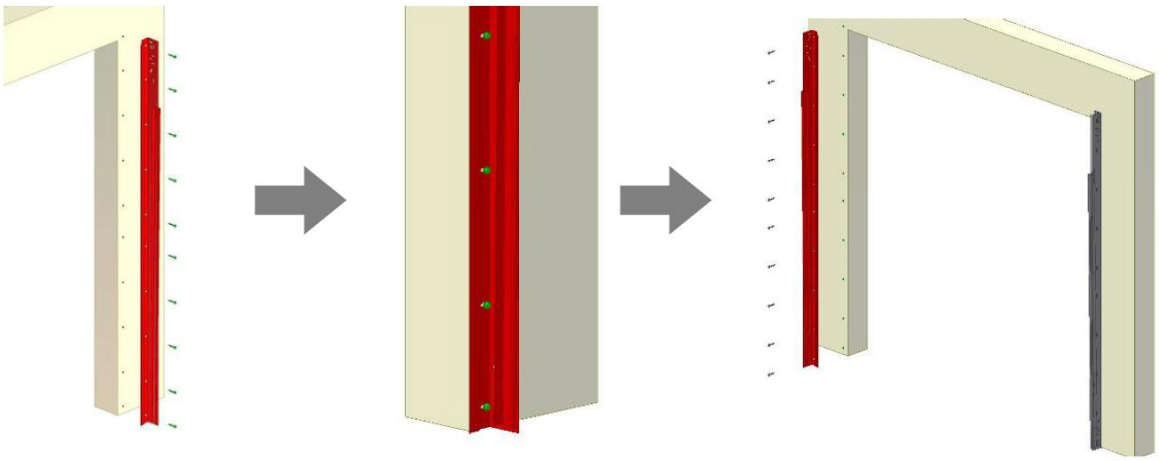


Drawing 3

When you have the minimum installation height (B) behind the spring package (above the horizontal extension tracks) we advise you to fit the top seal to the lintel first (see Assembly of Top Seal)

CONTINUED

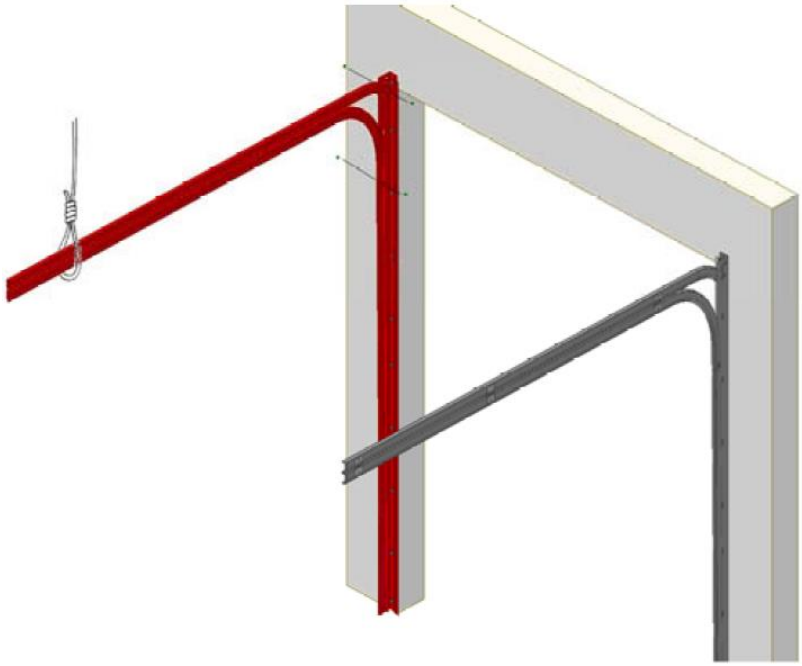
2. Fit both vertical tracks ensuring that the lower surfaces are an equal distance below points A and B and the edge of the tracks/rubber seal is flush with the edge of the brickwork/timber packing. The 2no. vertical tracks should be parallel to one another. **(Drawing 4)**



Drawing 4

Assembly of the Horizontal track

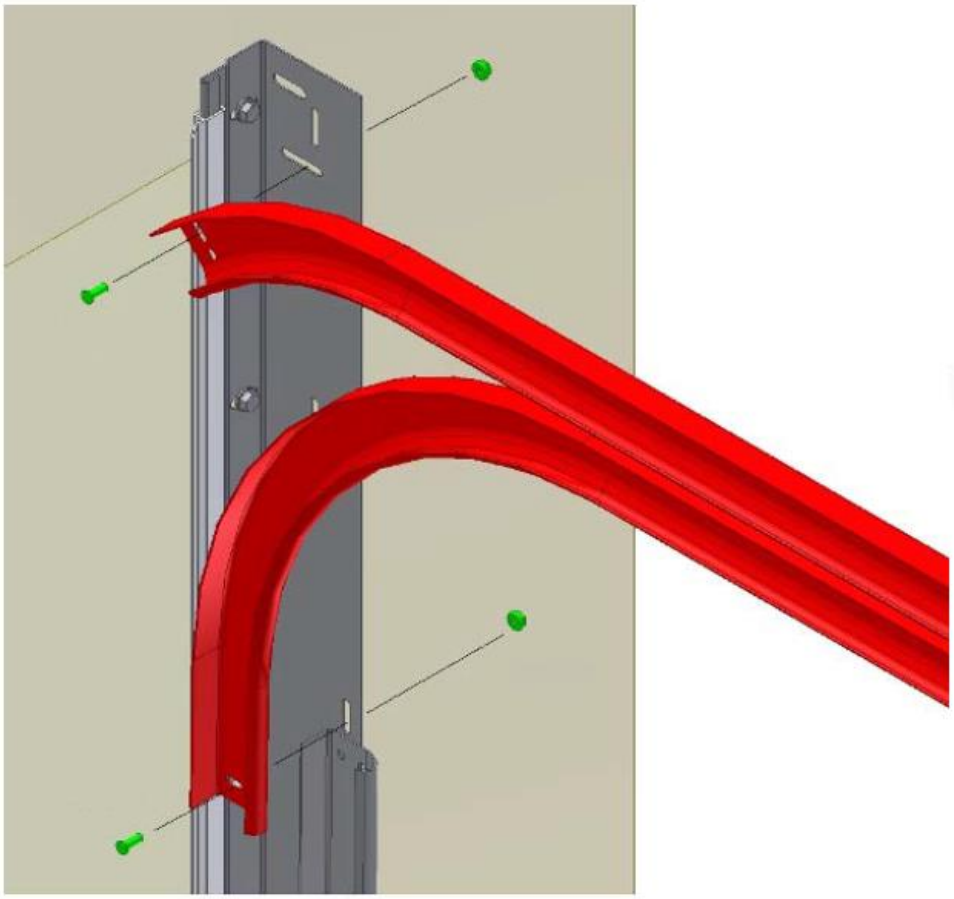
Attach a piece of cord to the ceiling or the roof structure to temporarily support the rear end of the horizontal tracks during the assembly process **(Drawing 4)**



Drawing 5

3. Fit the horizontal tracks to the side plate of the vertical tracks. (**Drawing 5**)

4. Insert the M6 track bolts from the inside through the holes of both horizontal tracks
5. Line up the horizontal tracks with the end of the curve of the vertical track.
6. Fit the M6 flanged nuts through the track connection points and secure them hand-tight



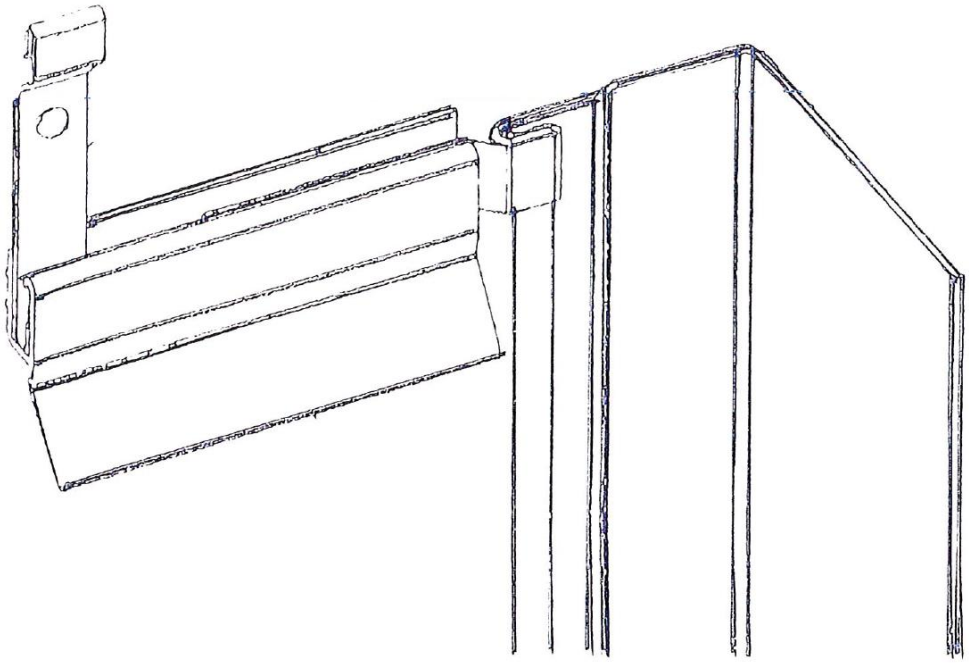
Drawing 6

CONTINUED

7. When supporting the horizontal tracks from the ceiling or roof structure fabricate a bracket using perforated angle between the track and the ceiling/roof structure.

Assembly of top seal

8. After fitting the tracks the top seal can be fitted using the stainless steel clips provided. Cut the seal to length (between the tracks) and fasten the clips so the seal lines up with the underside of the door opening. **(Drawing 7)**



Drawing 7

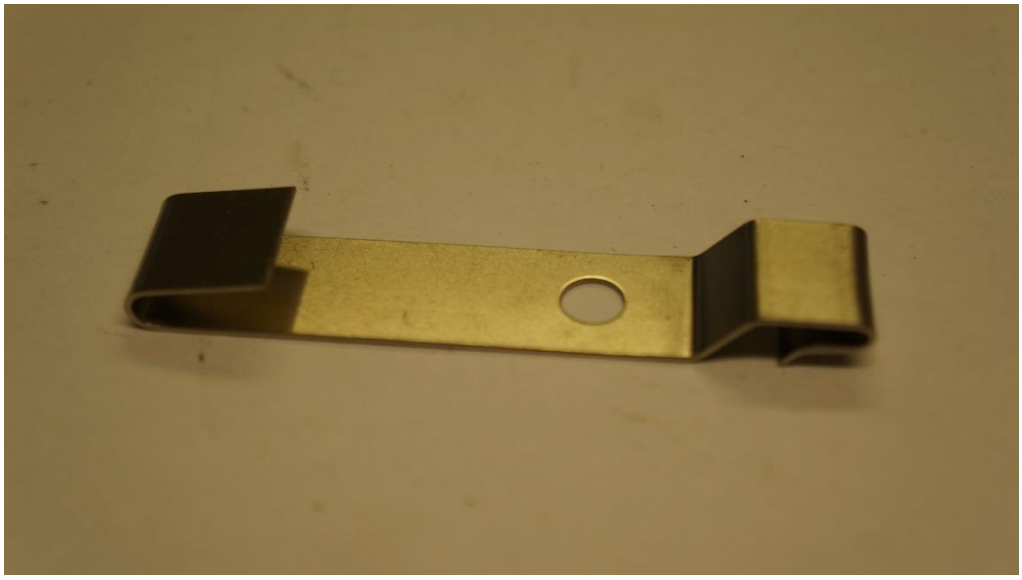
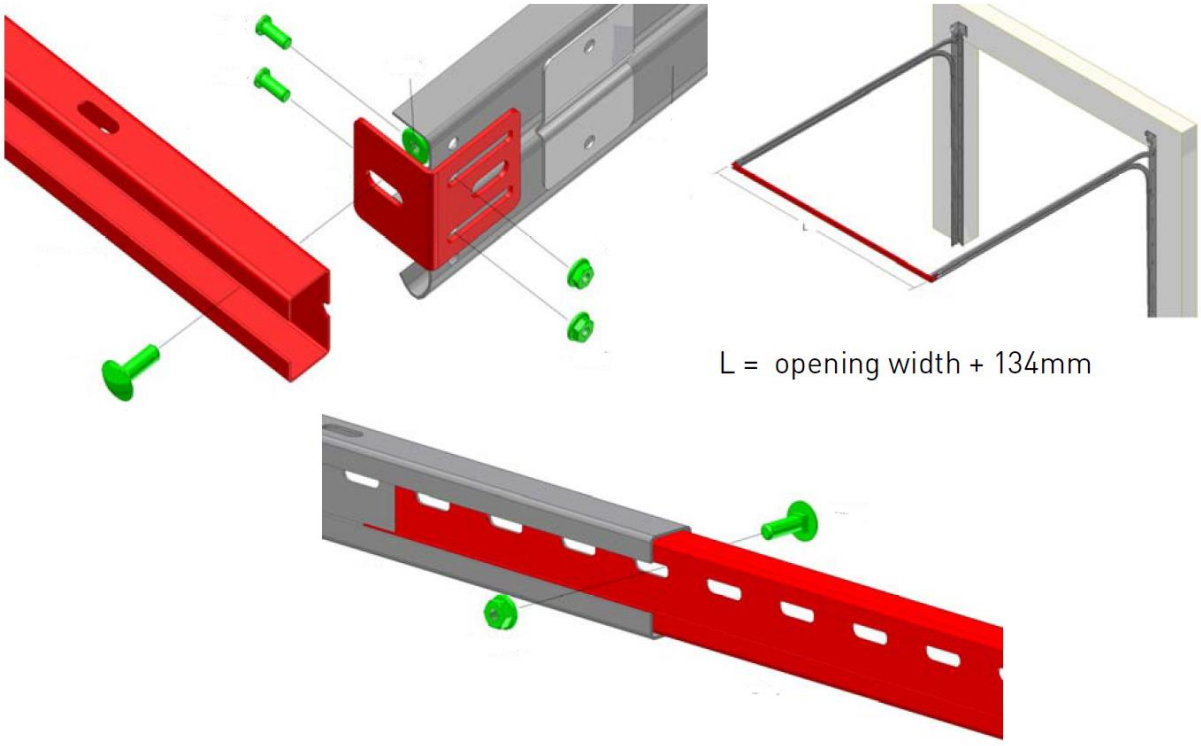


Figure 1 Top Seal Clip

When fitting the <u>optional</u> interconnecting profile between the horizontal tracks (Drawing 8)

9. Fit the angle bracket with 2no. press bolts and 2no. flanged nuts to the end of one upper horizontal track



Drawing 8

10. Slide profile out to span the length between the ends of the horizontal tracks
11. Fit the second angle bracket with 2no. press bolts and 2no. flanged nuts to the end of the opposite upper horizontal track
12. Insert the M6 bolt through the central hole and secure to finger-tightness

13. **Check and tighten all track fixing and jointing bolts and screws**

CONTINUED

Assembly and fitting of the spring package (Drawing 9)

During this section the locations of the springs, spring break devices and cable drums, when viewed from inside the garage, will determine how they are described. For example the components located to the right hand side of the door will be stated as "right handed".

14. Slide tube spindle through spring break device (left hand) approx. 200mm leaving the majority of the spindle on the inboard side. **The nuts and the cog mechanism of the spring break device should always be facing inboard towards the centre of the door when the long edge is facing upwards.**

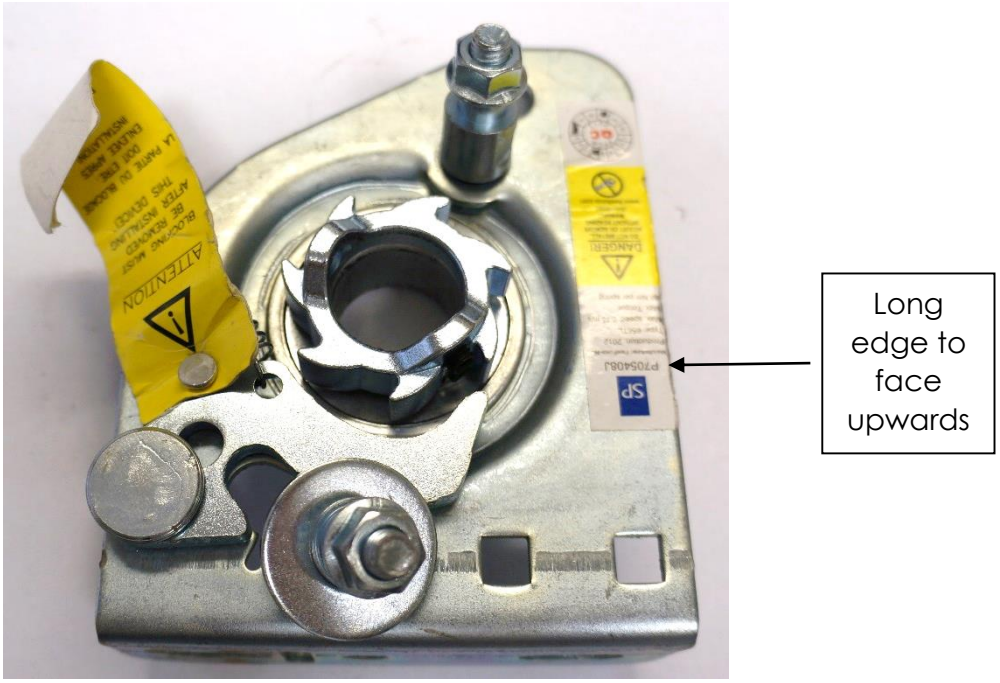


Figure 2 Left handed spring break device

15. Slide left hand spring onto the tube spindle ensuring that the tension plug is towards the inboard side and the bolt holes can engage with the spring break device. The tension plug of the left hand side spring is painted black.

Figure 3 Left Hand Spring - Note Black Tension Plug

16. Slide one USA-A bearing onto the inboard side of the spindle along with the bearing holder

Figure 4 USA-A Bearing and Holder

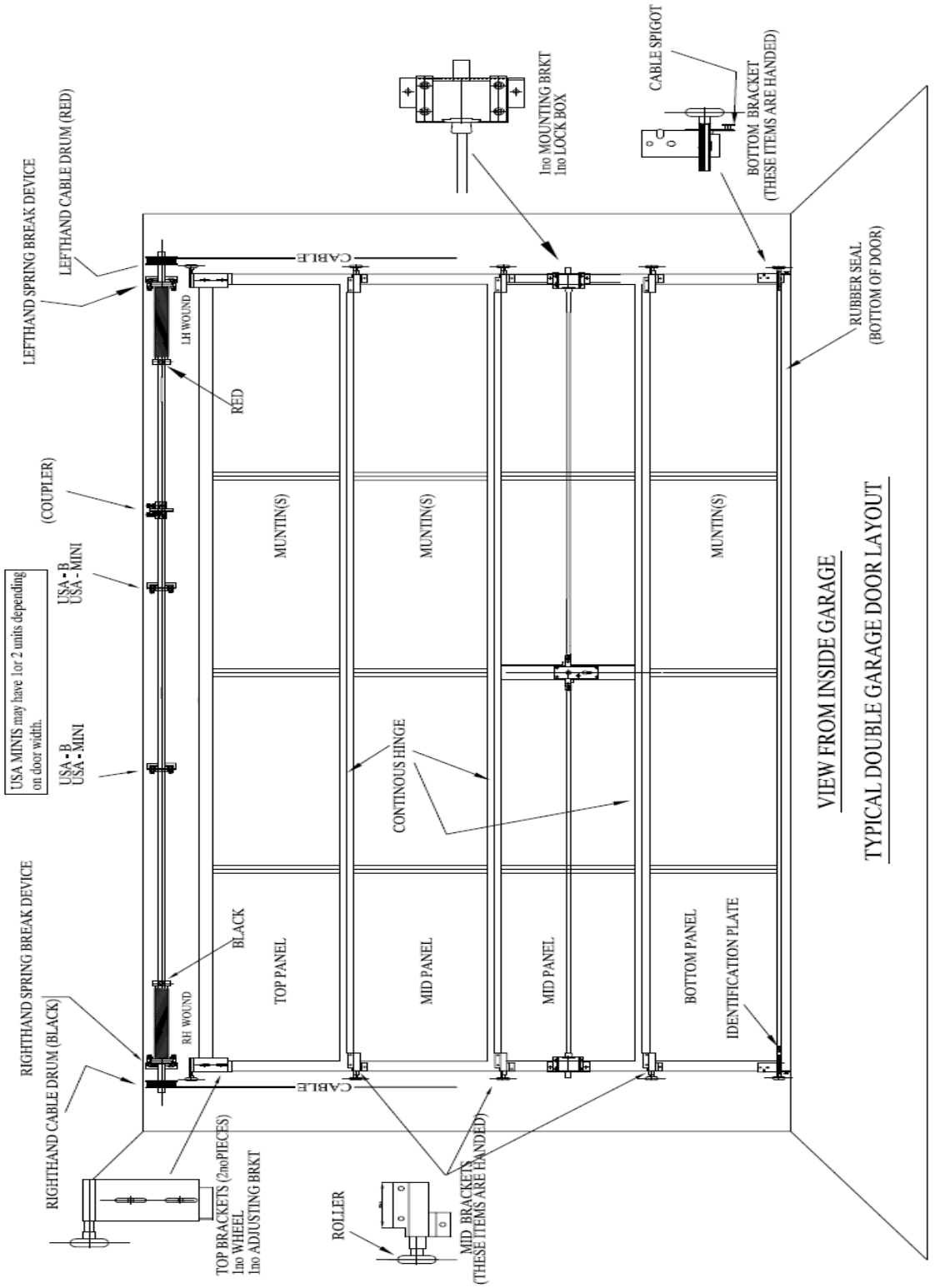
17. Repeat procedure substituting right-handed components
18. Connect both spindles together using the coupler (hand tight)
19. **Using assistance where necessary** lift the entire spring array into positon and centralise the spindle. Ensure that at least 30mm of spindle protrudes beyond the tracks on each side.
20. Secure spring break device/s and bearing brackets to the lintel. Ensure that all support units and the spindle are level and parallel with the tracks using a spirit

level. Centralise spindle and secure bearings **See Drawing 9 for approximate positions**

21. Slide the cable drums (left and right handed) onto the ends of the spindle with bolt sides facing inboard. Ensure that the inside edge of each is level with the vertical track and secure the bolts to hand tightness.

Figure 5

22. Connect the spring break devices and springs to the spindle by following the instructions included in the spring break device packaging. **Do not apply any tension to the springs at this point!!**

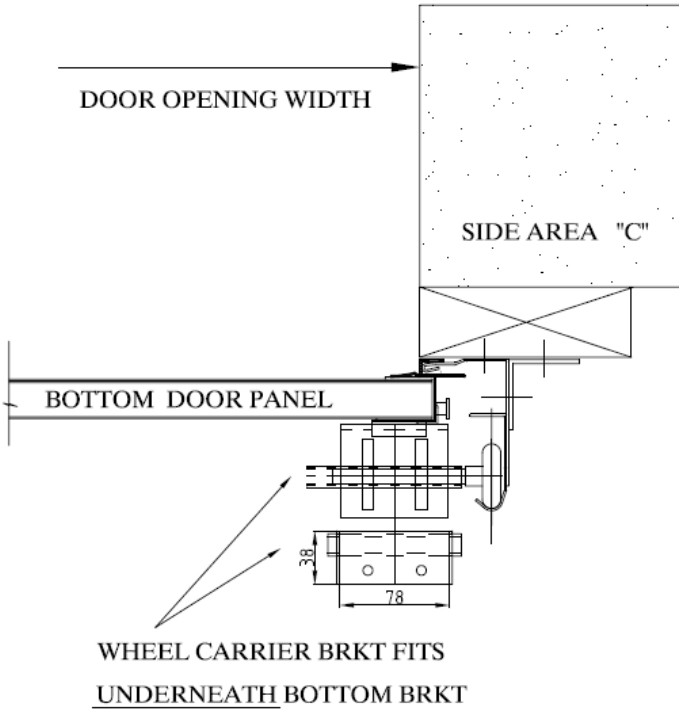


Drawing 9

Installation of the door panels

23. Place bottom door panel in between the tracks making sure it is level (pack up from underneath as necessary).
24. Take the cables and fit the looped ends over the cable spigots on the bottom brackets. Run the cable up in the tracks and temporarily attach to the slots in the cable drums
25. Place the rollers into the bottom slide brackets, locate them into the tracks and secure them to the underside of the bottom bracket hand tight **(Drawing 10 & Fig 6)**

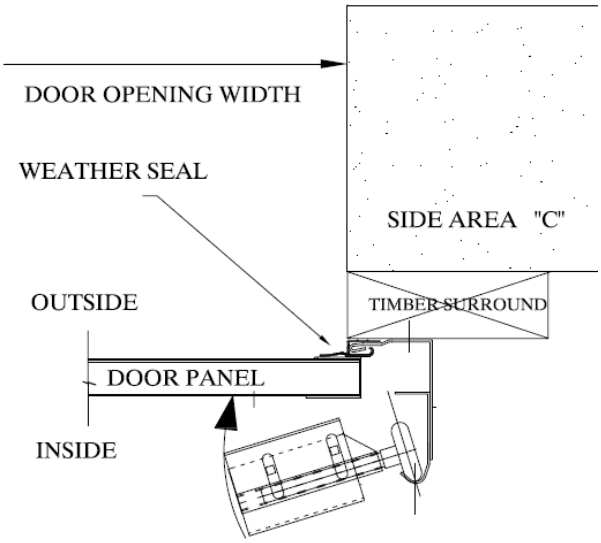
Figure 6 Bottom Roller Carrier



Drawing 10

CONTINUED

26. Place a roller into the tube of a middle bracket and insert the assembly into the track. Push the bracket back against the panel and use the M6 bolts (3 per side) to secure the bracket. Ensure that adjustment bolts are hand-tight. Repeat procedure on opposite side of panel. **(Drawing 11)**



Drawing 11 Middle Roller Carrier

Figure 7 Middle Roller Carrier In-situ

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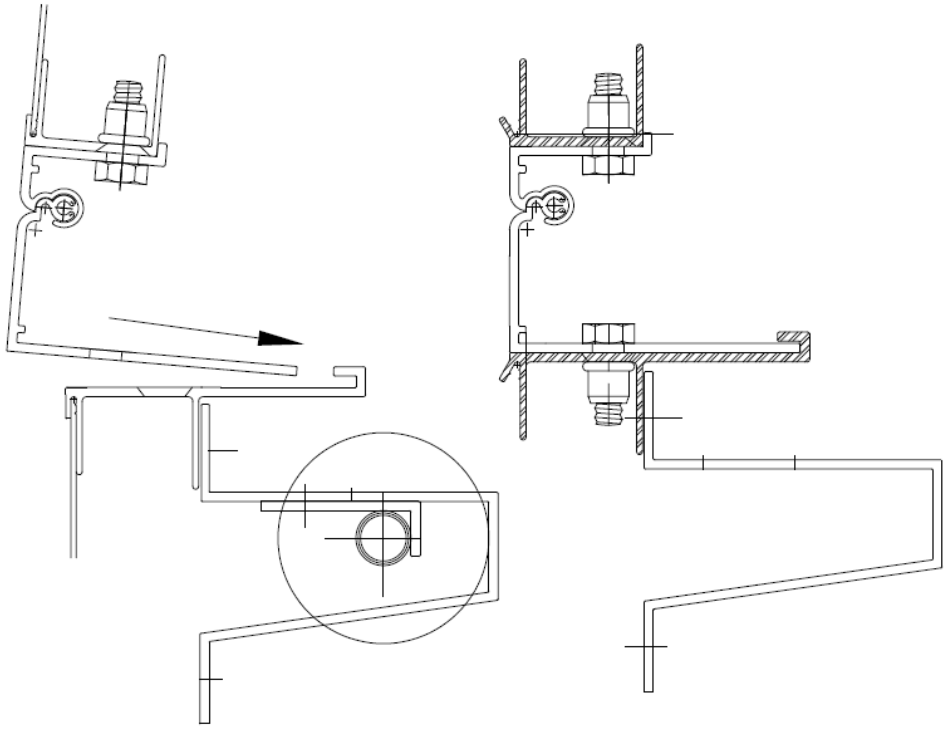
27. Offer the second panel into the tracks and lean it slightly backwards to engage the extrusion into the slot on the lower panel and secure with M6 bolts along the length **(Drawing 12)**.



Drawing 12 Extrusions Engaging

28. Place the middle rollers into the track and push the brackets against the panel. Use the M6 bolts to secure the brackets. **(Drawing 11 shown previously)**
29. Repeat procedure for each remaining panel until reaching the top panel's uppermost roller carrier.
30. The top roller locates into the upper of the 2 tracks and uses only 2 M6 bolts for securing per side. Locate the roller into the track and secure the bracket to the top panel (hand tight). Repeat on both sides.

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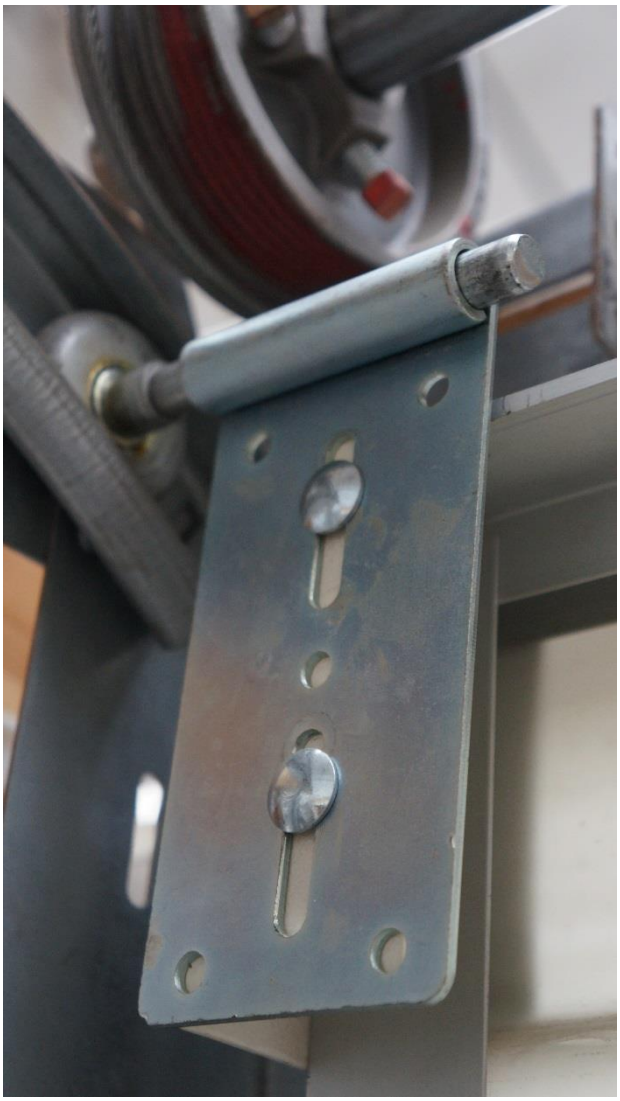

Figure 8 Top Roller Carrier and Bracket

31. Tighten all bolts that hold the panels and brackets together then adjust the panels against the front rubber seal by pushing the door panels forwards while pulling back on the roller brackets. Ensure that the roller brackets slide back squarely. **(Drawing 13)**

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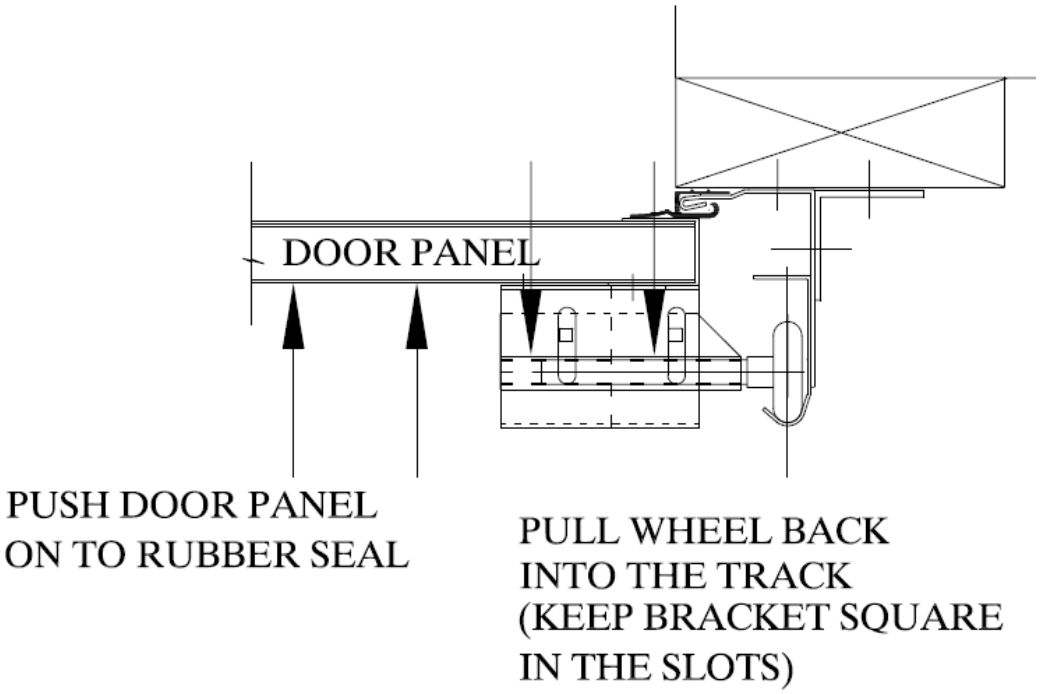
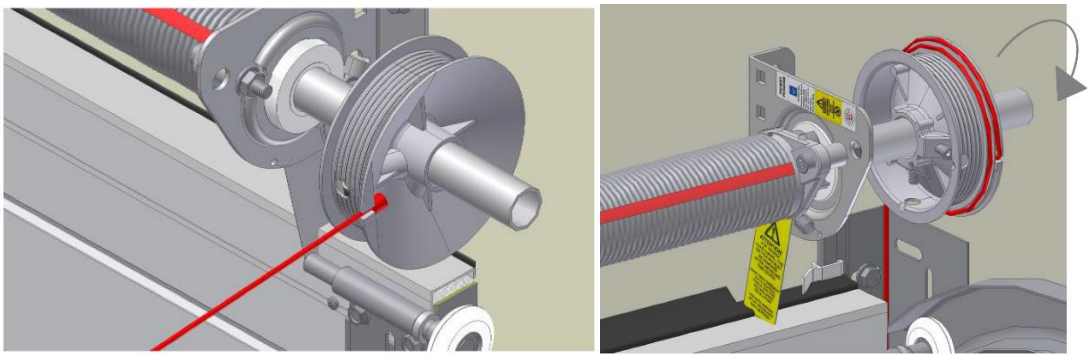


Drawing 13

32. Tighten all bolts on the roller slide adjusters once each panel is properly adjusted.

Fitting of cables and tensioning of the spring set

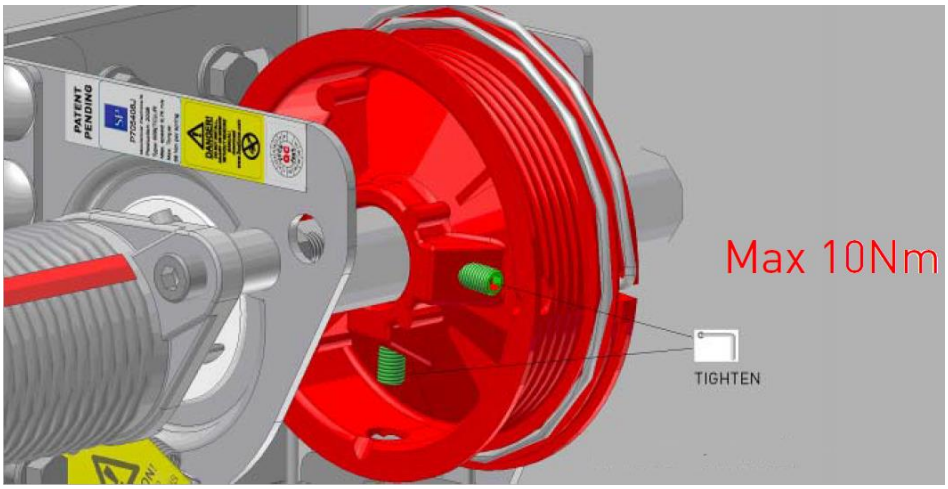
33. **Before carrying out any further works secure the spindle and the door panels using mole grips to prevent any movement.**
34. Make sure the cable is located into the slot on the drum and rotate the drum to take up the excess. **(Drawing 14)**



Drawing 14 Fitting the cable to the Drum

35. Position the drum on the shaft and, making sure the cable is vertical, secure using the 2 adjustment bolts. **(Drawing 15)**

Drawing 14 Cable routing to bottom roller carrier

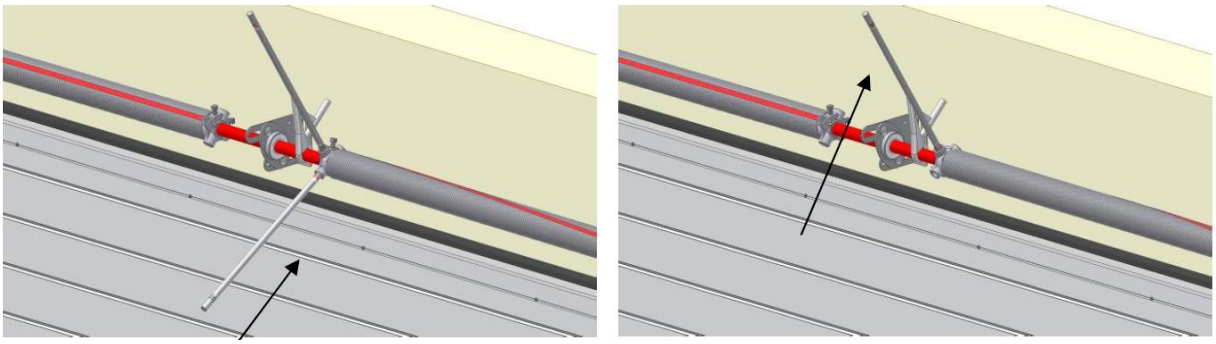


Drawing 15 Positioning and securing the Drum

36. Repeat procedure on the opposite side of the door

37. **CAUTION! Torsion springs are subject to considerable tension. Proceed at all times with extreme caution. Installation, maintenance and repair should only be carried out by experienced and properly trained overhead door fitters using correctly fitting and properly maintained tension levers.**

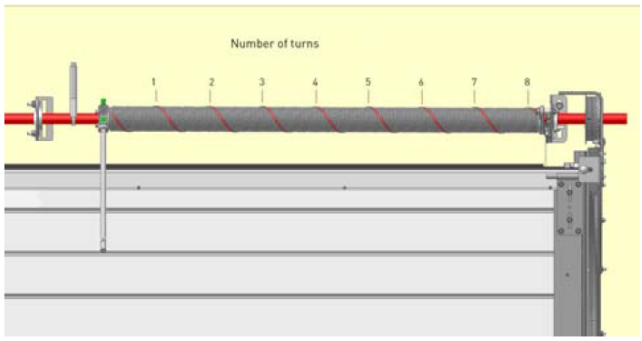
38. Ensuring that the shaft and door panels are still clamped into position insert the first tension lever into the lugs **(ENSURE THAT THE LEVERS ARE THE CORRECT FIT FOR THE LUGS)** and turn the spring by a ¼ turn such that the spring is tensioned. **(Drawings 16 and 17)**



Drawing 16 Tensioning the Springs

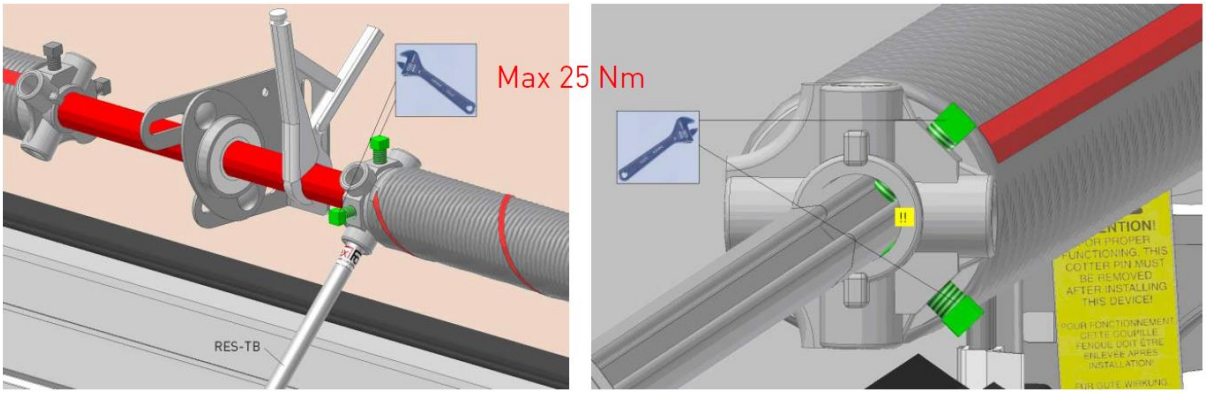
Number of turns on the torsion springs:

Height (H)	4 panels	5 panels
2000mm	7.1 turns	6.8 turns
2125mm	7.6 turns	7.3 turns
2250mm	8.0 turns	7.7 turns
2375mm	8.4 turns	8.7 turns
2500mm	8.5 turns	9.2 turns
	5 panels	**6 panels**
2750mm	9,4 turns	9,2 turns
3000mm	10,3 turns	10,0 turns



Drawing 17 Spring tensioning guidelines

39. Insert the second lever completely into the next lug. Take over the tension of the spring from the first tension lever. Remove the first tension lever, turn the second lever a ¼ turn then repeat the process until the desired number of turns are achieved.
40. Leaving a tension lever in place to rest against the upper part of the door secure the spring plugs to the shaft using the bolts. Before tightening the bolts pull the spring along the shaft slightly to reduce rubbing as the spring turns**(Drawing 18)**



Drawing 18 Securing the spring to the spindle

41. Repeat the procedure for the second spring and secure to shaft
42. **CAREFULLY** release the mole grips from the spindle and door panels and check door balance.
43. If adjustment is necessary re-secure the shaft and door in the closed position and adjust the spring tension equally on both sides.

Fitting the lock brackets (Manual Version)

44. The main body of the lock will be installed onto a middle panel prior to dispatch so only the brackets and inner/outer lock handles need to be fitted.
45. Lower the door and secure it into a partially closed position using mole grips to enable work to be carried out on both sides of the door
46. Fit the lock handles by offering the outer handle complete with shaft from the outside. Locate the inner handle on the shaft then fix using grub screws.

47. Offer the lock brackets to the ends of the locking mechanism and mark the hole positions on the outside of the vertical track

Figure 9 Lock Bracket

48. Drill the holes and connect the bracket using the flat headed track bolts provided.
49. Repeat the procedure on the opposite side and adjust the brackets as required.
50. Test the overall operation of the door and adjust components as required.

The door is now fully operational.

Service and Maintenance

General

Torsion springs, brackets and other components which are attached to the springs and cables are under extreme tension. If not handled properly injuries or damage might occur!

Replacement of broken or worn components should always be carried out by qualified overhead door mechanics using genuine Filuma Spare Parts.

When checking a motorised door unit always ensure that the 230v mains supply has been disconnected before commencing any works.

Regular Maintenance

Use only PTFE, SAE20 or WD40 for greasing purposes

Use only soft soap and water for cleaning. DO NOT USE ABRASIVE OR CORROSIVE CLEANING AGENTS

After installation;

- Grease the running areas of the tracks
- Grease the bearings of the rollers
- Grease the shafts of the rollers
- Grease the spindle bearings
- Grease the hinges
- Grease the lock
- Clean the panels with soap and water – DO NOT USE ABRASIVE OR CORROSIVE CLEANING AGENTS
- Grease the rubber seals

After 3 months;

- Complete a visual inspection of the door
- Check balancing system and adjust as necessary
- Grease all components as stated in "after installation" section if required

Every 6 months or 750 operation cycles;

- Check side seals for damage/wear and tear
- Check top seal for damage/wear and tear
- Check bottom seal for damage/wear and tear
- Grease all components mentioned in "after installation" section
- Clean the panels per instructions in "after installation" section
- Remove dirt and waste from the door and its surroundings

Every 12 months or 1500 operation cycles;

When carrying out the spring related tasks in this section please use caution and follow the safety information provided in the installation section of this guide

- Check or test the fixation of the springs to the fittings.
- Check the balance of the door and adjust if required
- Check the cables for damage/wear and tear
- Check the cable connections on the drums and the bottom roller carrier
- Check the rollers for wear and tear and adjustment
- Check the hinges for wear and tear
- Check the panels for damage/wear and tear
- Check the spring break device according to the instructions enclosed with the units on delivery
- Check the manual operation of the door
- Grease the springs

After 2 years or 3000 operation cycles;

When carrying out the spring related tasks in this section please use caution and follow the safety information provided in the installation section of this guide

- Check or test the fixation of the springs to the fittings.
- Check the balance of the door and adjust if required
- Check the cables for damage/wear and tear
- Check the cable connections on the drums and the bottom roller carrier
- Check the rollers for wear and tear and adjustment
- Check the hinges for wear and tear
- Check the panels for damage/wear and tear
- Check the spring break device according to the instructions enclosed with the units on delivery
- Check the manual operation of the door
- Grease the springs
- Check the side seals for damage/wear and tear
- Check the top seal for damage/wear and tear
- Check the bottom seal for damage/wear and tear
- Check the spindle for damage/wear and tear
- Check the bottom roller carrier for damage/wear and tear
- Check the cable drum connections to the spindle
- Check and re-fix the bolts of the coupler
- Check the connections of the track system
- Check the suspension of the door to the lintel and ceiling

Spare Components

All components and consumables are available from McKenzie Martin. Please feel free to contact us using the details below if you require any items or information.

Filuma c/o McKenzie Martin Ltd
Eton Hill Works, Eton Hill Road
Radcliffe, Manchester
M26 2US
Tel - 0161-724-6622
Fax – 0161 725 9531
E-mail – Sales@FIluma.co.uk
www.Filuma.co.uk

Please use only genuine Filuma spare parts and components to service Filuma doors. Use of non-standard or 3rd party components may void your guarantee